

CLAIMS:

1. A touch sensitive display (100) comprising
an active matrix display element (101) having a viewer proximal side and a
viewer distal side; and
a touch sensitive element (103) disposed on the viewer distal side of the active
5 matrix display element (101) and comprising:
a first conductive layer (113) comprising a first plurality of conductors;
a second conductive layer (115) comprising a second plurality of conductors; and
a pressure sensitive layer (117) sandwiched between the first conductive layer (113) and the
second conductive layer (115) and operable to modify an electrical conductivity between a
10 first conductor of the first plurality of conductors and a second conductor of the second
plurality of conductors in response to a pressure point resulting from an applied pressure.
2. A touch sensitive display as claimed in claim 1 wherein the touch sensitive
element (103) comprises a plurality of pressure sensitive elements.
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3. A touch sensitive display as claimed in claim 2 wherein the plurality of touch
sensitive elements is formed by the first and second plurality of conductors.
4. A touch sensitive display as claimed in claim 2 wherein the plurality of
20 pressure sensitive elements is aligned with pixels of the active matrix display element (101).
5. A touch sensitive display as claimed in claim 1 wherein the first plurality of
conductors forms rows of a pressure sensitive array.
- 25 6. A touch sensitive display as claimed in claim 1 wherein the second plurality of
conductors forms columns of a pressure sensitive array.
7. A touch sensitive display as claimed in claim 1 wherein the pressure sensitive
layer (117) comprises a piezoelectric material operable to modify the electrical conductivity.

8. A touch sensitive display as claimed in claim 1 wherein the pressure sensitive layer (117) comprises Micro-ElectroMechanical (MEM) switches operable to modify the electrical conductivity.
- 5 9. A touch sensitive display as claimed in claim 1 further comprising detection means operable to determine a position of the pressure point in response to the change in electrical conductivity between the first conductor and the second conductor.
- 10 10. A touch sensitive display as claimed in claim 9 wherein the detection means is operable to detect a plurality of simultaneous pressure points.
11. A touch sensitive display as claimed in claim 9 wherein the detection means comprise a signal source (309) for outputting a signal on the first conductor and a sense amplifier (311) coupled to the second conductor for detecting an electrical signal caused by an electrical conductivity being formed between the first conductor and the second conductor in response to the pressure point.
- 15 12. A touch sensitive display as claimed in claim 11 wherein the electrical signal is an electrical charge and the sense amplifier (311) is a charge sensitive amplifier.
- 20 13. A touch sensitive display as claimed in claim 11 further comprising a display controller having a buffer amplifier (309) operable to provide a display control signal and wherein the touch sensitive display is operable to couple a single amplifier (309) as the buffer amplifier (309) in a display driver configuration and as the signal source (309) in a pressure point detection configuration.
- 25 14. A touch sensitive display as claimed in claim 11 further comprising a display controller having a buffer amplifier (311) operable to provide a display control signal and wherein the touch sensitive display is operable to couple a single amplifier (311) as the buffer amplifier (311) in a display driver configuration and as the sense amplifier (311) in a pressure point detection configuration.
- 30 15. A portable device comprising a touch sensitive display as claimed in claim 1.